

Please enter the following amendments and remarks.

Listing of the claims:

What is claimed is:

1. - 48. (Canceled)

49. (Currently amended ) A method for detecting bladder cancer in a human test subject, said method comprising:

a) ~~Q~~quantifying in RNA of a blood sample from said test subject, a level of RNA encoded by ~~the gene an~~ an ADAM metalloproteinase domain 9 (meltrin gamma) (ADAM9) gene in said a blood sample of said test subject; and

b) ~~C~~comparing said quantified level of RNA in said sample of said test subject with a quantified level of control RNA encoded by said gene ~~and detected in RNA of blood~~ samples from of control subjects which are classified as healthy control subjects; and

c) comparing said level of RNA in said sample of said test subject with a quantified level of control RNA encoded by said gene in blood samples of control subjects which are classified as having bladder cancer;

~~wherein said comparison of a statistically significant determination resulting from steps (b)~~ and (c) that expression of said quantified level of step (a) with gene in said sample of said test subject is different relative to said quantified level of said samples of said control ~~RNA~~ subjects classified as healthy control subjects, and is similar relative to said samples of said control subjects classified as having bladder cancer is indicative of bladder cancer in said human test subject.

50. (Currently amended) The method of claim 49, wherein said blood sample of ~~step (a)~~ said test subject and said blood samples ~~from of~~ said control subjects in step (b) are selected from the group consisting of whole blood samples, blood samples which have not been fractionated

into cell types and blood samples which comprise leukocytes which have not been fractionated into cell types.

51. (Cancelled)

52. (Currently amended) The method of ~~any of claims 49 or 61, 50 or 51~~, wherein said quantifying of said level of ~~said~~ RNA encoded by said gene in ~~step (a)~~ said sample of said test subject is effected ~~by quantifying said RNA~~ relative to a housekeeping gene.

53. (Currently amended) The method of ~~any of claims 49 or 61, 50 or 51~~, wherein said quantifying of said level of ~~said~~ RNA encoded by said gene in said sample of said test subject in step (a) is effected by quantification of cDNA ~~corresponding complementary~~ to said RNA encoded by said gene.

54. (Cancelled)

55. (Canceled )

56. (Currently Amended) The method of ~~any of claims 49 or 61, 50 or 51~~, wherein said quantifying of said level of ~~said~~ RNA encoded by said gene ~~in step (a)~~ is ~~determined~~ effected using quantitative ~~real-time~~ RT-PCR.

57. (Currently amended) The method of ~~any of claims 49 or 61, 50 or 51~~, wherein said quantifying of said level of ~~said~~ RNA encoded by said gene ~~in step (a)~~ is ~~determined~~ effected using an array.

58. (Currently amended) The method of claim 49, wherein said human test subject is suspected of having bladder cancer.

59. (New) A method for detecting expression of an ADAM metallopeptidase domain 9 (meltrin gamma) (ADAM9) gene in a human test subject, said method comprising detecting RNA encoded by said gene in a blood sample of said test subject, using an oligonucleotide of

predetermined sequence which is specific only for RNA encoded by said gene in said sample, and/or for cDNA complementary to RNA encoded by said gene in said sample.

60. (New) The method of claim 59, wherein said detecting of RNA comprises producing an amplification product from RNA encoded by said gene in said blood sample of said test subject, using primers specific only for RNA encoded by said gene and/or for cDNA complementary to RNA encoded by said gene.
61. (New) The method of claim 59 or claim 60, further comprising quantifying a level of RNA encoded by said gene in said sample.
62. (New) The method of claim 61, further comprising comparing said level of RNA to a quantified level of control RNA encoded by said gene in blood samples of control subjects.
63. (New) The method of claim 62, wherein said control subjects are selected from the group consisting of: subjects classified as healthy subjects and subjects classified as having bladder cancer.
64. (New) The method of claim 63, wherein said control subjects are classified as healthy subjects.
65. (New) The method of claim 64, further comprising classifying said test subject as being a candidate for having bladder cancer if said level of RNA encoded by said gene in said blood sample of said human test subject is significantly different relative to that of said control subjects classified as healthy subjects.
66. (New) The method of claim 66, wherein said gene is differentially expressed in said blood sample of said human test subject relative to said samples of said control subjects classified as healthy subjects with a p value less than 0.05.

67. (New) A method of screening a human test subject for being a candidate for having bladder cancer, said method comprising:

- (a) detecting RNA encoded by an ADAM metallopeptidase domain 9 (meltrin gamma) (ADAM9) gene in a blood sample of said test subject, using an oligonucleotide of predetermined sequence which is specific only for RNA encoded by said gene in said sample, and/or for cDNA complementary to RNA encoded by said gene in said sample; and
- (b) quantifying a level of RNA encoded by said gene in said sample of said test subject; and
- (c) comparing said level of RNA in said sample of said test subject to a quantified level of control RNA encoded by said gene in blood samples of control subjects classified as healthy subjects;

wherein said test subject is a candidate for having bladder cancer if said level of RNA encoded by said gene in said blood sample of said test subject is significantly different relative to said level of RNA encoded by said gene in said samples of said control subjects classified as healthy subjects with a p value less than 0.05.

68. (New) The method of claim 59, 60 or 67, wherein said blood sample is selected from the group consisting of: a whole blood sample, a blood sample which has not been fractionated into cell types, and a blood sample which comprises leukocytes which have not been fractionated into cell types.

69. (New) The method of claim 61, wherein said blood sample is selected from the group consisting of: a whole blood sample, a blood sample which has not been fractionated into cell types, and a blood sample which comprises leukocytes which have not been fractionated into cell types.

70. (New) The method of claim 62, wherein:

- (i) said blood sample of said test subject and said blood samples of said control subjects are whole blood samples; or

- (ii) said blood sample of said test subject and said blood samples of said control subjects are blood samples which have not been fractionated into cell types; or
- (iii) said blood sample of said test subject and said blood samples of said control subjects are blood samples which comprise leukocytes which have not been fractionated into cell types.

71. (New) A method of classifying ADAM metallopeptidase domain 9 (meltrin gamma)

(ADAM9) gene expression in a human test subject, said method comprising:

- (a) quantifying a level of RNA encoded by said gene in a blood sample of said test subject;
- (b) comparing said level in said sample of said test subject with a quantified level of RNA encoded by said gene in blood samples of control subjects classified as having bladder cancer; and
- (c) comparing said level in said sample of said test subject with a quantified level of RNA encoded by said gene in blood samples of control subjects classified as healthy subjects;

wherein a determination from steps (b) and (c) that said level in said sample of said test subject is statistically similar to said level in said samples of said subjects classified as having bladder cancer and is statistically different relative to said level in said samples of said subjects classified as healthy subjects, results in a classification of ADAM9 gene expression in said test subject with that of said subjects classified as having bladder cancer, and

wherein a determination from steps (b) and (c) that said level in said sample of said test subject is statistically different relative to said level in said samples of said subjects classified as having bladder cancer and is statistically similar to said level in said samples of said subjects classified as healthy subjects, results in a classification of ADAM9 gene expression in said test subject with that of said subjects classified as healthy subjects.

72. (New) The method of claim 61, wherein said quantifying of said level of RNA encoded by said gene is effected by quantifying said level of RNA relative to a housekeeping gene.

73. (New) The method of claim 61, wherein said quantifying of said level of RNA encoded by said gene is effected by quantification of cDNA complementary to RNA encoded by said gene.
74. (New) The method of claim 62, wherein said control subjects do not have bladder cancer.
75. (New) The method of claim 61, wherein said quantifying of said level of RNA encoded by said gene is effected using quantitative PCR.
76. (New) The method of claim 61, wherein said quantifying of said level of RNA encoded by said gene is effected using an array.
77. (New) The method of claim 59, 67 or 71, wherein said human test subject is suspected of having bladder cancer.